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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,747	02/15/2005	Kiyoshi Saito	MAT-8664US	6847

23122 7590 09/14/2005
RATNERPRESTIA
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VALLEY FORGE, PA 19482-0980

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/524,747

Applicant(s)

SAITO, KIYOSHI

Examiner

Christopher P. Schwartz

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

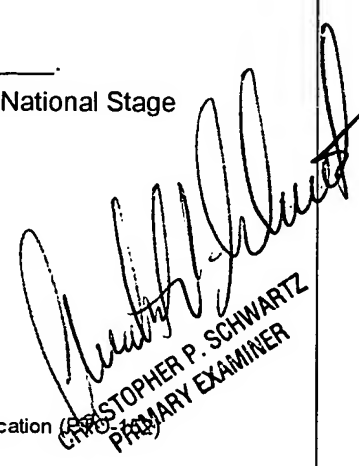
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-910)
- 6) ☐ Other: ____.


CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement has been received and considered.

Drawings

2. The drawings are objected to because it is unclear in figure 1 what the difference is between the shaft 3b and the piston 3 as they appear to reference the same structure. It is also unclear what constitutes the "travel mechanism". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rotatable connection of the "travel mechanism" and the brake arm, as claimed in claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese publication 253327 ('327) in view of Pluta et al. and JP 247020 ('020).

Regarding claim 1 JP '327 discloses a device similar to applicant's which uses a tension spring, as seen in figure 1 and a brake device 10 for determining a "stepping amount" of the brake pedal.

JP '327, as best understood, lacks a specific disclosure of a stepping force sensor and a brake arm that generates a stepping force that changes non-linearly with respect to a travel stroke of the brake arm.

The reference to Pluta et al. is relied upon for the structural arrangement and alternative locations for the placement of a force sensor arrangement, as seen in figures 1,3,4. Such force sensor arrangements, that sense the force in the spring, are notoriously well known in the art. Although not relied upon see for instance the patent to Poertzgen et al. '510.

The reference to JP '020 teaches in the several embodiments that alternative non-linear spring arrangements may be used dependent upon the pedal feel desired.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the device of JP '327 with a force sensor and spring arrangement, as taught by Pluta et al. and JP '020, simply as an alternative BBW system to that of JP '327 dependent upon the pedal feel characteristics desired.

Regarding claim 2, as broadly claimed, these requirements are met. Note the pin connections at 106 and 163 of Pluta et al. This arrangement is considered to be a "rotatable connection"—at least as much as applicant's is.

Regarding claims 3,4 these limitations are taught by JP '327, as modified. Note the spring arrangement has hooking portions at each end of the spring and on the fixed structure and brake arm. To have placed a sensor here having a hooked portion so that it can sense the force of the spring would have merely amounted to an alternative sensing arrangement to that taught collectively by the references above. See for instance figure 12 in JP '020 (which correspond to applicant's prior art figures) which has the sensor located at the end of the spring.

6. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese publication 253327 ('327) in view of Pluta et al. and JP 247020 ('020) as applied to claim 2 above, and further in view of Shaw or Zucchini.

Regarding claims 5-10 JP '327 as modified lacks showing the specifics of the spring(s) and piston arrangement claimed.

However such arrangements as applicant's at 12 are old and well known in the art and can be used in many different applications, as taught by either Shaw or Zucchini.

It would have been obvious to one of ordinary skill in the art to have used a different tension spring arrangement in JP '327, as modified above, simply as a substitution of one well known tension for another.

Please note the claimed volute or hourglass springs are notoriously well known in the art. Their choice would have amounted to an obvious alternative equivalent dependent upon the force characteristics desired.

Conclusion

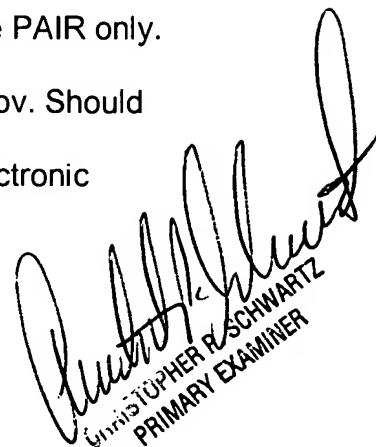
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the well know types of coil springs cited.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 571-272-7123. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chuck Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
9/8/05


CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER